

Bonita Springs Utilities Design-Build Projects, Bonita Springs, Florida

- 23-year relationship providing consulting & design-build (DB) services for water treatment plants (WTP) and water reclamation facilities (WRF)
- In April 2007, the East WRF was the first membrane bioreactor plant commissioned in the State of Florida
- The East WRF was awarded the 2008 Design-Build Institute of America Excellence Award for Projects over \$15 Million

CH2M HILL's close working relationship with BSU incorporates a wide range of planning, engineering design, and construction services to support the needs of their wastewater collection, treatment, and effluent reuse systems, as well as potable water treatment and storage.

Our partnership with BSU began in 1987 with the project design for Phase II of the BSU Water Treatment Plant and Wellfield Expansion. In 1996 we completed design of an additional facility expansion to increase the plant capacity to 7 MGD. In 2002, CH2M HILL completed Phase III DB expansion of the West WRF to increase capacity to 7mgd.

The principal components of the West WRF project involved the design and construction of a new master influent pumping station with a rated capacity of 28 mgd (1.2 m³/sec), modifications to the existing screening and de-gritting pretreatment structure, a new flow splitting structure, a new denitrification basin, a new final clarifier, expansion of the existing chlorine contact basin, and a sludge de-watering. Additionally, CH2M HILL was tasked with providing full automation of the existing and new facilities that include 2 new electrical buildings, motor control centers, switchgear, programmable logic controllers, and workstations.

To further expand BSU's potable water production capacity, CH2M HILL completed the new Reverse Osmosis (RO) WTP DB Project in 2004, including new brackish water supply wells, a new membrane treatment



plant and a new concentrate disposal deep injection well to work with BSU's lime softening plant.

Completed on schedule in 2004, the new plant uses a well field located near the utility's existing lime softening WTP to obtain raw water from a brackish aquifer that the existing lime softening WTP is incapable of successfully treating. The new RO WTP has a Phase I capacity of 6.5 mgd, expandable to 13 mgd.

In 2004 CH2M HILL was awarded the DB contract to design and construct a new 4-mgd East WRF. The facility comprises state-of-the-art advanced technologies such as membrane bioreactors (MBR) and a centralized sludge drying system to promote potable water savings through the use of high quality reclaimed water for irrigation, and provide a high quality Class A dried solids for fertilizer, while anticipating the need to meet more stringent regulatory requirements in the future. When this plant was placed online in December 2006, it became the first membrane bioreactor plant commissioned in the State of Florida.

BSU and CH2M HILL's successful partnering resulted in numerous project awards over the years. In 1998, BSU was one of only 10 awardees statewide among 7,000 eligible candidates to receive a Plant Operations Excellence Award from the Florida Department of Environmental Protection. In 2000, BSU's WTP was recognized by the American Water Works Association as the Most Improved WTP in Florida. In 2008, the East WRF was awarded the 2008 Design-Build Institute of America Excellence Award for Projects over \$15 Million.

"CH2M HILL is one of the few consultants I can count on to act as an extension of my staff. When I need help and need it now, I know that CH2M HILL will deliver."

**Fred Partin, Executive Director,
Bonita Springs Utilities**